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Home Landscape

Understanding the basics of landscape design

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... and justice for all

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Water features help create a calm, cooling atmosphere (see page 7).

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Where do I start?

Taking a problem-solving approach is a good way to start thinking about your landscape and what you want it to be. By identifying the constraints of your site and creatively applying basic design principles you can create a functional landscape that meets your needs and is environmentally sound and aesthetically pleasing.

Establishing a context for good design is an important first step. Equally important is the additional question—"why design?" Using the principles and process of landscape design helps you identify your own sense of style, including what you like and dislike. It encourages you to study and appreciate the outdoor living space potential and quality-of-life enhancements that good design can provide.

Finally, quality landscape design incorporates sustainability, affordable maintenance, and efficient use of water and other resources in developed landscapes.

Planning and Homework

Planning a landscape can start long before you have a yard to landscape. If a landscape design or redesign is in your future, it's never too early to start collecting pictures of landscapes you like. Going on garden tours and visiting public gardens are great ways to get inspiration for your own design as well as to see what plants and hardscape materials (i.e. patio and deck materials) work well in your climate. Training your eye to evaluate what you see in other landscapes and analyzing what you like or don't like about the design can help you visualize what your landscape could look like.

Function and Fit

Besides affecting the appearance of a landscape, design also plays a significant role in how a landscape functions and "feels." Landscapes should enhance viewer quality-of-life as well as user quality-of-life. The creation of comfortable, functional outdoor living, entertaining, and playing space should be an assumed outcome of design, but unless it is identified as a priority and given careful consideration, it can be easily overlooked.

Design for Sustainability

Sustainability should be a priority consideration in the design and management of any landscape. Sustainable landscapes typically require minimal amounts of water, fertilizers, pesticides, labor, and building materials.

Creating a sustainable landscape means working toward a thoughtful balance between resources used—during both construction and maintenance—and results gained.

Sustainable landscapes require as much, if not more, planning as a traditional landscape, but the aesthetic, environmental and cost benefits over time can be considerable. However, many traditional landscapes also may contain various components of sustainability.

A well-designed landscape can be both beautiful and environmentally beneficial. Plants can protect water quality by reducing fertilizer leaching and runoff, and by reducing surface runoff. Proper landscaping can reduce soil erosion and prevent sediments from reaching streams and lakes. Plants can improve air quality by removing carbon dioxide, dust, and other pollutants from the air. Deciduous trees placed properly on the south and west sides of a house can reduce summer temperatures in the home, including a significant reduction in attic temperatures. This translates to air conditioning units that run two to four percent more efficiently.

If these environmental benefits aren't enough, research by the



When trees are planted to shade your home, they help reduce indoor temperatures.

real estate industry shows that an attractive landscape can increase the value of a home by an average of 7.5 percent. In addition, a beautiful landscape can reduce the amount of time the house stays on the market by five to six weeks. Beyond these immediate cost benefits, maintenance costs for a sustainable design are typically less over time as compared to the costs of traditional landscape maintenance.

When you begin planning a landscape, think about the entire area of the property and what you want to achieve. During each step in the process consider your likes and dislikes. Envision both the character of the landscape and the potential for quality experiences within it. Lastly, think about how you can incorporate sustainability into your design (i.e. through proper plant selection; by choosing recycled building materials; limiting plants with high fertilizer, water, or maintenance requirements) and ultimately achieve a landscape that enhances your local environment.

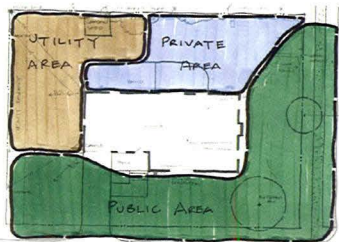
Identify Home Landscape Use Areas

Just as in a home, a landscape is composed of areas that are used for different purposes.

The main areas are:

- the public area which is most often in the front of the house;
- the private area, often found in the back of the house; and
- the service area which is generally in the back or side yard areas and contains utility features such as a garden shed or compost pile.

It is important to design each of these areas to meet your needs, create an attractive overall landscape, and incorporate sustainability concepts.



Most home landscapes have three use areas: public, private, and service.



A well-designed public area frames your home.

Public Area

This is the area the public sees from the street. The main purpose is to frame the house and create a visually appealing and inviting landscape. An attractive entryway or walkway to the house is a primary feature and is often surrounded by an uncluttered area of grass or another type of groundcover. Planting beds containing shrubs and herbaceous plants around the front of the house also help to enhance the view.

When selecting shrubs to frame the front door, consider their texture, leaf and flower color, size at maturity, and shape. They should enhance the total visual effect without blocking doors or windows.

Trees should be placed where they will frame the house when viewed from the street or sidewalk. Tall shade trees (30 to 50 feet) should be used for a two-story house while smaller trees (15 to 25 feet) are better for a one-story house. Using a tall shade tree with a one-story house makes the house look smaller and affects the proportion of that area.

For maximum framing effect trees should be placed at a 45-degree angle out from the corner(s) of the house. If the sideyard is too narrow to accommodate this angle, the tree location should be adjusted accordingly. Regardless, the tree should be given plenty of room to grow, and the house should be the focal point of the public area design.

Landscape lighting is another way to enhance the front entrance. Lighting along a walkway enhances safety and guides people to the front door at night. These lights can be combined with uplights or spotlights near the entryway to provide a dramatic entrance.

Recent advances in landscape lighting technology (variable voltage transformers, longer battery life for solar-powered fixtures) and materials (copper, ceramic, metal, etc.) have expanded the styles and lighting applications available to homeowners. In addition to being functional, many of these new lighting elements also are attractive and increase the aesthetic quality of the landscape.



Carefully placed lighting enhances your landscape and makes it more usable at night.

Private Area or Family Area

The private area, often called the family area or outdoor living room, is an important part of the American home. Providing easy access from the house to the outdoor area is a first step toward creating a space that will meet your needs.

Including features such as motion sensor lights, other types of outdoor lighting, or even a portable fire pit will increase the usefulness of this area and extend the amount of time it can be used during the day and throughout the year.

In this area of the landscape a patio or deck often defines an area for outdoor furniture or outdoor cooking. Many materials available for patios and decks are made from recycled materials or renewable resources, such as composite wood, recycled brick, or plantation-grown wood. Incorporating these environmentally responsible materials is a good way to enhance sustainability in your landscape.

The patio or deck size influences how comfortable it will be to use. For example, a 10x10 foot area is the minimum size needed to comfortably accommodate four people eating at a table.

Other issues to consider when designing the family area are privacy, year-round interest, climate control, and a children's play area.



This patio is appropriately-sized for the homeowner's table and chairs.



A deck adjacent to a back door is a common feature in the private area.

How much space is needed?

Use	Recommended Size
Sitting area with 2 chairs	5x5 foot
Sitting area with 4 chairs	8x8 foot
Pair of lounge chairs	8x8 foot
Eating area for 2 people	6x4 foot
Eating area for 4 people	10x10 foot
Eating area for 6 people at a picnic table	8x7 foot
Eating area for 8 people at a picnic table	10x7 foot
Cooking/food preparation (grill only)	2x2 foot
Cooking/food preparation (countertop only)	2x4 foot
Cooking/food preparation (grill and countertop)	5x5 foot

Privacy—Careful placement of shrubs and trees can create a sense of enclosure and screen the area from public view and nearby neighbors. You and your family will need to decide how much of the year privacy is needed.

Is the area used mainly in the summer? If so, deciduous plants or tall container plantings may provide enough privacy.

If the area is used extensively and the neighbors are close by, hedges or a grouping of large densely branched shrubs that are at least six feet tall can provide a visual barrier.

Shrubs that are more loosely branched can be used in combination with a fence to provide privacy and enclosure, and depending on the type of fence can provide year-round privacy.

Strategically placed trees can block views from second story windows but it may take several years for them to reach mature size and provide privacy.

For a smaller area, a trellis or fence covered with vines can be used to create a sense of privacy.



Gates and fences can create privacy and add a sense of mystery to the landscape.

Year-round interest—Year-round interest is valuable throughout the landscape, and is especially important if the area is visible from the family area and house. Evergreen trees, shrubs and vines, plants with colorful bark or fruit, and perennials with interesting foliage and seed heads are all good selections to expand the visual interest through the growing season. Strategic plantings of annuals and bulbs can provide additional color during the growing season. Pools, stone steps, paving, walls, bird feeders, and other architectural features also can be incorporated to provide additional interest.

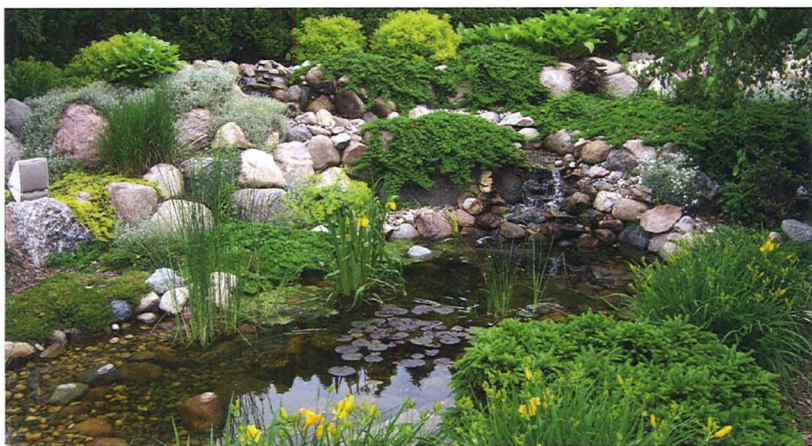


Crabapples (*Malus* 'Prairiefire') are just one group of plants that provides multi-season interest.

Ten Shrubs for Year-round Interest

Botanical Name	Common Name	Height/Width (in Feet)
<i>Amelanchier arborea</i>	Downey serviceberry	15-20/20-30
<i>Acer ginnala</i>	Amur maple	15-20/20-25
<i>Viburnum trilobum</i>	American cranberrybush	10-12/10-12
<i>Viburnum prunifolium</i>	Blackhaw viburnum	10-15/10-12
<i>Aronia arbutifolia</i>	Red chokecherry	6-8/6
<i>Berberis koreana</i>	Korean barberry	4-6/4-6
<i>Itea virginica</i>	Virginia sweetspire	4-5/5
<i>Cotoneaster apiculatus</i>	Cranberry cotoneaster	2-3/3-5
<i>Symphoricarpos orbiculatus</i>	Indian currant coralberry	3-4/4-5

These plants thrive in USDA cold hardiness zones 4 and 5. Other choices may be more appropriate in other parts of the country.



A water feature conveys the effect of coolness during summer and provides background noise.

Climate control—While no one can control the weather, landscaping decisions can affect the comfort of an area during variable weather conditions and extend the usefulness of an outdoor living space. Evergreen trees provide year-round screening and shade, while well-placed deciduous trees can screen an area from hot summer sun while allowing maximum winter sun exposure for solar heating. An awning or trellis structure covered with plants can protect against inclement weather. Additionally, if space allows, a garden pool or fountain can convey the effect of coolness during summer and provide soothing background noise.



Playground areas can range in size and style. Include children in the planning; their ideas may surprise you.

Children's play area—The play area can be part of the outdoor living area, or separate from it. Consider the children's ages and activities to determine the size, surface, and design needed. For very young children, a small area enclosed by a fence near the patio/deck or a window where they can easily be seen from inside is desirable. As children grow older, the design can be adjusted to meet changing recreational needs.

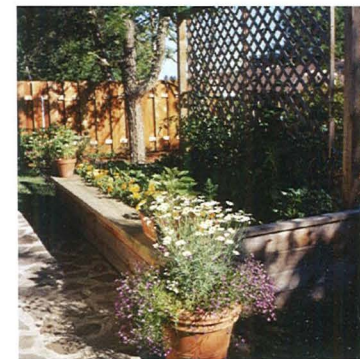


Carefully placed plantings (above) or fences (below) can screen areas designated for "stuff you need to put somewhere but don't want to look at."

Service and Work Areas

How you plan to use the landscape will impact how large a work area you need and where it might be located in the landscape. Avid gardeners might need a larger area to contain an extensive compost system or large shed.

Regardless of the size of the area it is important that it be screened from major views. Seldom does a compost pile make an attractive focal point! Screens such as a dense planting of shrubs, a vine on a trellis, or a fence can disguise or hide the area and make it less noticeable when viewed from other parts of the landscape. In addition to a compost area, the service area also might include garbage cans, tool and wood storage, or dog runs.



Apply Design Principles

Each designed landscape combines a variety of elements. Instead of hard and fast rules for landscape design, universal design principles should be considered. Following these principles does not guarantee quality design, but ignoring them often results in a landscape that falls short of its aesthetic, functional, or sustainable potential.

Depending on which garden design book you read or television show you watch, experts describe anywhere from three to 12 landscape design principles. In this publication we will focus on seven principles: order or design framework, repetition, rhythm, unity, balance, proportion and scale, and emphasis.

Each principle has specific characteristics. Each also influences other principles. Repetition of patterns, for example, strongly influences rhythm; balance is a key component of order.



The public area of this home landscape uses all seven of the design principles.

Design Principles Summary

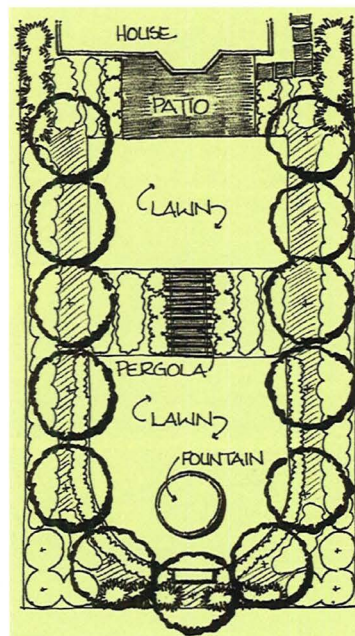
Principle	Possible ways to achieve	Relationship to other principles	Cautions
Order/Design Framework <small>(see page 10)</small>	<ul style="list-style-type: none"> • Use well-defined bedlines and a consistent bedline theme • Plan for masses of landscape plants rather than all plants being separate • Establish defined rooms by creating walls and ceilings with plant masses, tree canopies, and hardscape elements (fences, arbors/ pergolas, lattice, walls, etc.) 	Balance tends to make order more visible and feel stronger	
Repetition <small>(see page 10)</small>	<ul style="list-style-type: none"> • Thoughtfully repeat one or more of the basic art elements (form, color, texture, size); for example, use red flowers at all entrances or use the same groundcover to edge all perennial flower beds 	Rhythm is created through repeated patterns and elements	<ul style="list-style-type: none"> • Too much repetition leads to boredom • Too little repetition leads to visual chaos
Rhythm <small>(see page 11)</small>	<ul style="list-style-type: none"> • Plan edges of flower beds to create a back and forth pattern • Arrange plants within a bed from short to tall • Vary the widths of lawn areas or paths (a broad S curve is more aesthetic than a series of short tight S curves) 	Repetition helps create rhythm	
Unity <small>(see page 12)</small>	<ul style="list-style-type: none"> • Line up edges between patterns and spaces (a bedline "crossing" a sidewalk and continuing on the other side should appear connected across the sidewalk) 	Repetition, emphasis	
Balance <small>(see page 12)</small>	<p>Symmetrical</p> <ul style="list-style-type: none"> • Place identical design components on both sides of a doorway, window, or path <p>Asymmetrical</p> <ul style="list-style-type: none"> • Place a small tree at one front corner of the house and three large shrubs at the other front house corner 		<ul style="list-style-type: none"> • Tends to look very formal • One element out of place creates imbalance
Proportion/Scale <small>(see page 13)</small>	<ul style="list-style-type: none"> • Choose plants for the corners of the house that are approximately two-thirds to equal in height to the eave 		<ul style="list-style-type: none"> • Shorter plants are not visually effective • Taller plants dwarf the house
Emphasis <small>(see page 13)</small>	<ul style="list-style-type: none"> • Create an intimate patio space by using a small tree with low canopy or a pergola that is about 8 feet tall • Place a birdbath or sundial at the intersection of two paths • Use a collection of white plants in a shaded location that is viewed from a window 		<ul style="list-style-type: none"> • The more unique the element, the more attention it will attract

Order/Design Framework

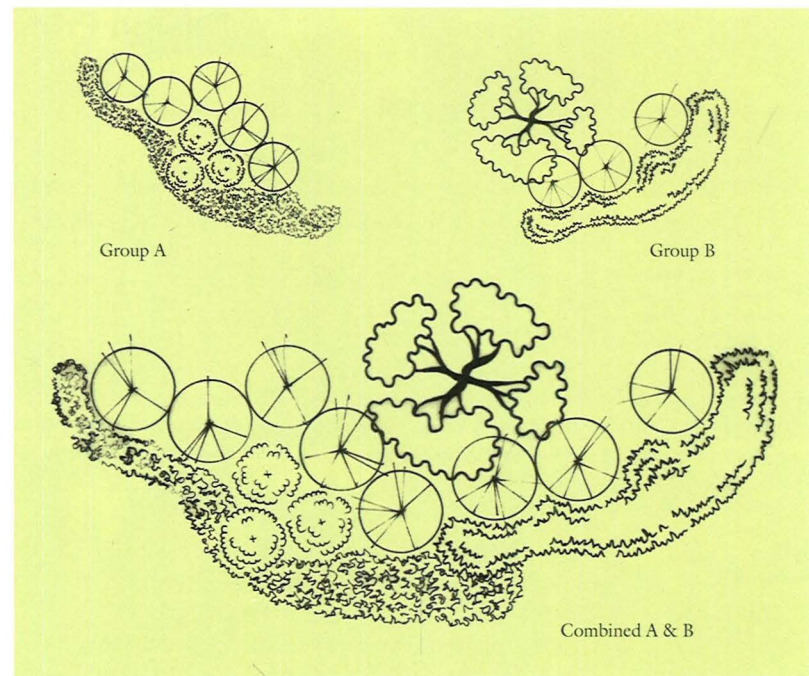
Order is the big picture or the overall framework of a design. One of the most obvious ways to achieve order is to use a consistent design theme, such as formal or informal, throughout the design.

Grouping plants and hardscapes to create physical connections between them helps enhance order and create a cohesive whole. Likewise, grouping plants together in masses rather than scattering individual plants around the landscape reinforces a sense of order, especially if plants are spaced so they form a solid mass when mature.

Groupings made up of an odd number of plants are more natural looking than even numbered groups.



A formal design framework often has a central axis with plants and other garden features mirrored on either side of the axis.



Combining plant groupings creates pleasing repetition rather than chaos.

Repetition

Repetition is created in a landscape by repeating any specific element—including color, form, texture, a particular plant, a mass of similar plants, or a plant grouping. A grouping can consist of just one type of plant or it may be a collection of several different species. This type of repetition helps tie the whole landscape together and results in a sense of unity between the different plant species that make up the design.

One of the most common mistakes beginning designers make is trying to incorporate too many different plant species. Whether a landscape is large or small, too much variety can result in chaos rather than pleasing repetition.

Group A (above) consists of five medium shrubs, three small shrubs and a mass of herbaceous ground-cover. Group B has a small ornamental tree, three medium shrubs and a mass of an evergreen ground cover. These two groups can be combined and then this larger grouping is repeated within the landscape.



An informal hedge of low-growing shrubs is an example of repetition and gives the design a sense of order.



Fence posts create visual rhythm.

Rhythm

Rhythm is organized movement; it addresses the factors of time and movement within a landscape. Landscapes are seldom experienced in an instant, but rather through time as a person explores a space or experiences a view. The journey may lead a person out a set of French doors onto a raised deck, down stairs to a large lawn, around a corner on a narrow stone pathway which ends at a small bench next to a water feature.

Rhythm may be visual as the eye is pulled or directed through the landscape, or it may be physical and result from various elements—such as pathways, stepping stones, or a patio—which move a person through the landscape.

Visual rhythm can be illustrated in a gradual progression of landscape elements, such as a mass of plants that goes from short to tall. Another example of this type of rhythm might be reflected in finials atop fence posts. As a person looks down the length of the fence an obvious pattern or rhythm is created by the fencepost finials.

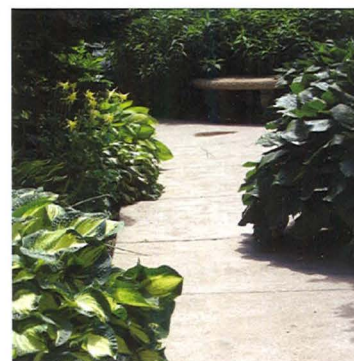
Physical rhythm can be influenced by a pathway's width and route, spacing of stepping stones, and locations of patios and/or resting elements.

A pathway that is relatively wide and has a firm, uniform surface encourages a person to walk quickly through the landscape. If the path is relatively straight or gently curving the pace also may be quick, but if the path has abrupt turns the pace will be slowed as a person decides how to proceed through the space. Abrupt changes in surfacing or path direction also may be used to direct views or enhance awareness of a landscape setting. Large stepping stones spaced far apart may encourage a long stride, whereas small stones spaced close together would encourage a more deliberate walking pace.

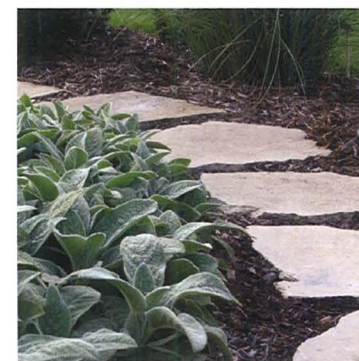
A patio or small seating area provides an opportunity to stop and observe the surrounding landscape.



Planned resting spots can be part of the physical rhythm of a landscape.



Wide, smooth pathways quicken the feeling of physical rhythm...



...while spaced stepping stones encourage walkers to slow down.



Repeated curves in the walkway and planting areas help create unity.

Unity

The principle of unity is demonstrated by a physical linking of various landscape elements—including plants, hardscapes, and buildings or structures.

Unity can be achieved in a variety of ways, some of which are subtle and others that are more obvious.

Repeating the blue of a door trim in blue containers on the front steps or in a planting of blue salvia along the sidewalk helps create unity.

Using a similar line for the edges of planting beds and walkways ties those elements of the landscape together.

Selecting the same paving material for a patio and adjoining walkway unites those two elements. Using a single groundcover throughout the landscape reinforces unity.

Repetition and unity work together to create a landscape that as a whole has a sense of cohesiveness and interconnectedness.



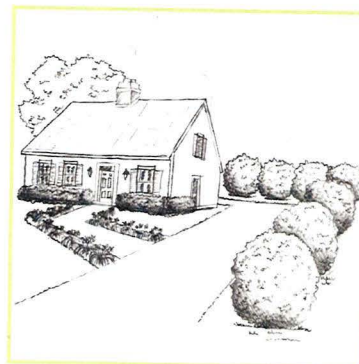
Overhanging tree branches plus potted plants arranged in symmetrical balance draw attention to the front door.

Balance

The two common types of balance in design are symmetrical and asymmetrical.

Symmetrical balance is most common in formal landscapes. These landscapes have an obvious central axis; everything on one side is mirrored on the other side.

The rigid and clear rules of a symmetrical landscape make it easy to design, but the formality of this type of design doesn't blend well with all home styles or family lifestyles or personalities.



Repeating the same plants on either side of the path, as well as along the driveway, create the formality of symmetrical balance.



Using a variety of plant materials in asymmetrical balance creates a more informal feeling for the same house.

Asymmetrical balance uses different sizes and shapes of objects on each side of a discrete axis, but the end result is still a similar visual mass on either side of the axis. Asymmetrical balance typically reflects a more informal and naturalistic appearance, is more flexible in its implementation, and is well suited for most residential landscapes.

Two common mistakes in developing an asymmetrical layout are lack of bold bedlines and an absence of a dominate space within the landscape. Completing a number of form composition studies (see page 27) can help organize the space more effectively and create spaces within the landscape that are appropriately sized to provide an adequate amount of visual weight.

Proportion/Scale

This principle refers to the size relationship that different elements within the landscape have to each other and to the people who use the space.

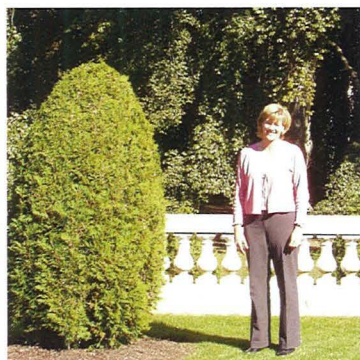
Two types of scale are usually considered in the home landscape: relative and absolute.

Relative scale describes the size relationships between different landscape elements. The most obvious relationship in the residential landscape is how the total landscape relates to the house. Since the house is often the dominant feature, it is important that at least some elements of the design be large enough so the house does not completely dominate the space.

Absolute scale is the relation of a particular design element to a human. It affects how you 'feel' when you are in the landscape. For example, features such as a large vine-covered pergola over a small patio, tall trees over a two-story house, or a large expanse of lawn and landscape beds may make the landscape viewer feel small. In contrast, a patio with a low structure or tree canopy "ceiling" will feel more intimate.

When considering the plant material in a design, the major relationships to consider are:

- plants to buildings,
- plants to other plants, and
- plants to people.



How a landscape feels depends on the comparable size between plants and people.



Small plants at the foundation of a two-story house are a common example of an improper scale.

Because plants change size over time, their role in the proportion equation also changes.

To achieve correct proportion, the landscape design should be based on the mature height and spread of the plants. Although proportion may be out of scale when the plants are young, they will grow into proportion with other objects in the landscape.



People are drawn to this front porch because of the emphasis created by the architectural details, dark columnar tree, inviting stone bench, and attractive plantings.

Emphasis

Focal points can be used for emphasis. They spark our visual interest and draw our attention when viewing the landscape as a whole. A focal point may be a specimen plant, garden accessory, or water feature that captures a landscape viewer's focus through its unusual line, shape, texture, or color. Each major area in a landscape (i.e. front yard and back yard) typically has a focal point. If the area is large and divided into smaller spaces, multiple emphasis areas might be considered.

Regardless of number and location(s), overusing focal points dilutes their ability to attract attention.

Choosing the best location for a landscape emphasis feature depends on functional as well as aesthetic considerations. For example, if you view the back yard most often from a sliding glass door in the breakfast nook, then your focal point should be visible from that spot. In the front yard, placing a focal point near the front door or along a selected pathway helps draw a visitor's eye to that location and subconsciously directs them to the door.

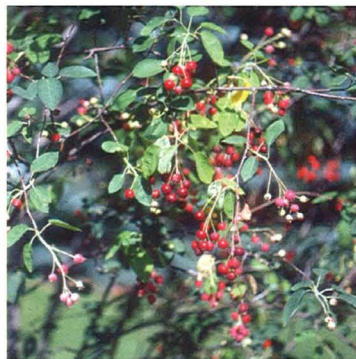
Consider Plant Choices

Although plant selection can be a daunting task, it also can be one of the most enjoyable parts of creating a beautiful and functional home landscape. If your plant knowledge is limited, or if you want additional inspiration, a number of garden references are available to help you make well-informed decisions (see list on page 31). Many not only describe the plant's height, spread, leaf and flower color, but also highlight a plant's water, fertilizer, maintenance, and adaptability characteristics.

Plant selection should be based first on the environmental requirements of the plant and second on the aesthetic qualities of the plant.



Like crabapples, serviceberry (*Amelanchier arborea*) provides season-long interest.



Environmental Requirements

Environmental requirements include a plant's hardiness level, heat zone tolerance, light, moisture, and soil requirements. If a plant is not suited to the place where it is planted it will not thrive and will likely require extra care to keep it alive. In extreme cases the plant will die. Time spent analyzing the soil, light, and moisture conditions of each planting area increases the likelihood that appropriate plant selections are made.

Aesthetic Qualities

Aesthetic qualities include a plant's form, color (foliage, flowers, fruit, or bark), texture, and mature size. Giving priority to plants that provide year-round or multi-season interest increases the value of your landscape investment. For example, a small tree such as a serviceberry (images at left) provides attractive spring flowers, fruit that changes from red to blue in June, and striking yellow-orange fall color.

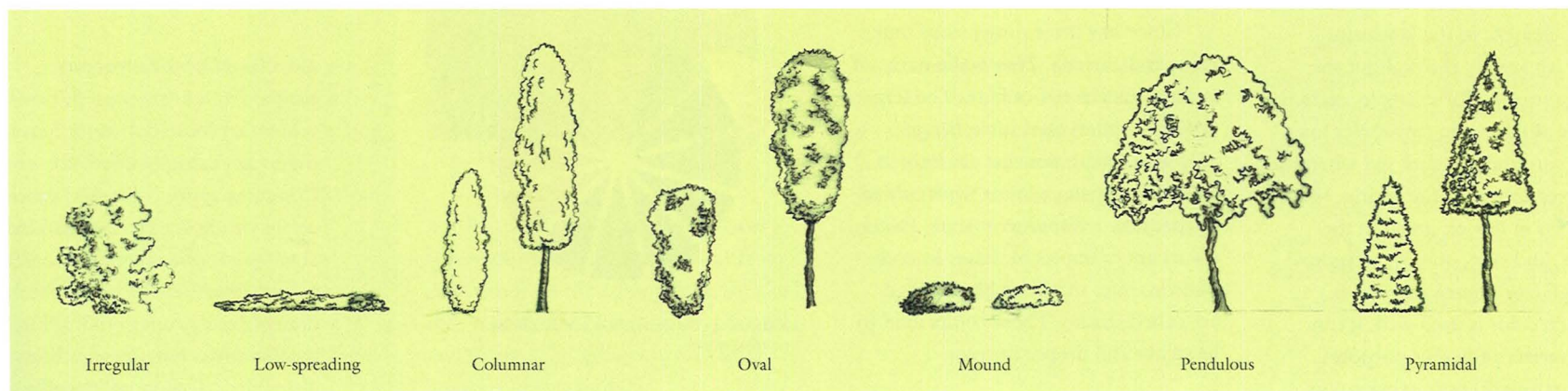
Combining multi-featured plants in the landscape gives a sequence of blooms and color in your landscape throughout the year. Flowering trees can provide pastels in spring; beds of perennials and annuals can furnish vivid or cooling hues in summer. Trees and shrubs whose leaves turn yellow, orange, and crimson can brighten gray autumn days; the bark and fruit of some species are attractive throughout the winter. Strongly contrasting textures also can create interesting year-round effects.

Form—From a design standpoint, form is one of the greatest attributes of plants because they come in so many different shapes. When choosing plants for a design, form is essential because it is visible all year long. Flowers fade and leaves die, but form persists. Using a variety of forms in the landscape helps create visual interest.

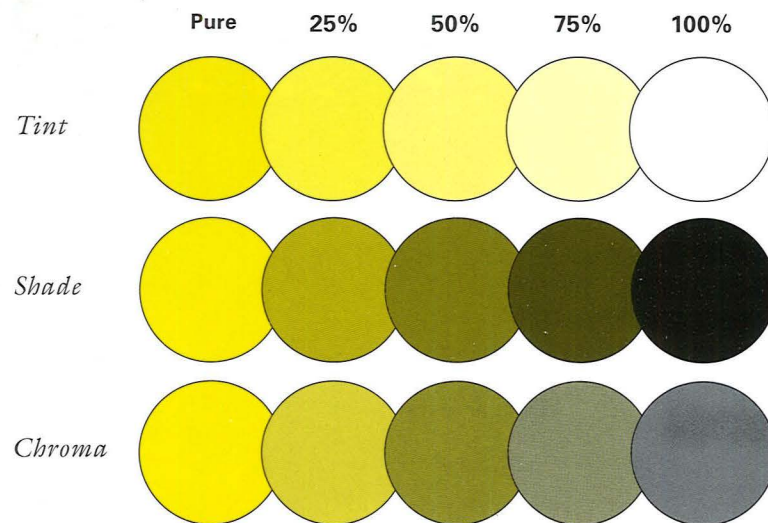
Repeating selected forms can help provide unity and continuity in the landscape. Remember that repetition of form also can come from other landscape elements, such as a patio paving pattern, garden art, fences, or flower shapes.



Using a variety of plant forms in a design creates interest, while repeating selected forms can enhance unity.



Regardless of color or texture, a plant's form is persistent in the landscape.



Value scales illustrate different levels of color purity.

Color—The first feature most people consider when choosing plants is color. It is often what initially catches our attention when looking at a landscape.

Color also tends to be the most fleeting element in the landscape. It can vary greatly throughout the growing season. For example, certain varieties of flowering crabapples may appear burgundy or dark red when the new leaves appear in the spring, bright pink when in flower, green in the summer, and rust, orange, or bronze in the fall (see photos on page 6.)

When color is used well, it can serve a variety of design purposes. Bold or strongly contrasting colors

can establish strong focal points. Repeated colors can create a sense of unity within the landscape by visually tying many elements (plants, house, patio, walkway, etc.) within the design together.

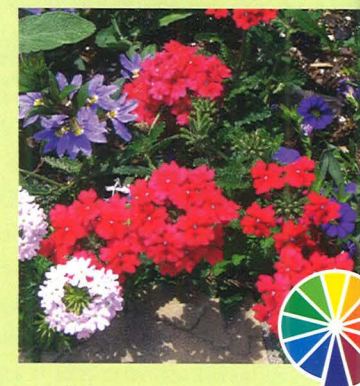
Color has three dimensions: hue, value and chroma. **Hue** is the name of a color, such as red or blue. The term “color” is often used interchangeably with hue. Hues that are light as a result of having a lot of white added to them are referred to as tints. Pastel colors are examples of these. In comparison, hues that have black added are called shades. These colors tend to be richer and deeper in color.

Value describes how light or dark a color is; it is sometimes called lightness or luminosity. This light or dark quality is based on the amount of light reflected back by the colored object. **Chroma** is the third dimension of color. It is sometimes called saturation or purity and is a measure of the actual hue content. Pure hues have the most chroma, while grays have the least chroma. A color with high chroma looks vibrant.

A basic color wheel can help you determine color combinations. The three primary colors are red, blue, and yellow; the three secondary colors are green, orange, and violet. Color can be further classified as complementary, analogous, warm, or cool. Basic planting combinations include monochromatic and triadic schemes. Grays can play an important unifying role in a composition.



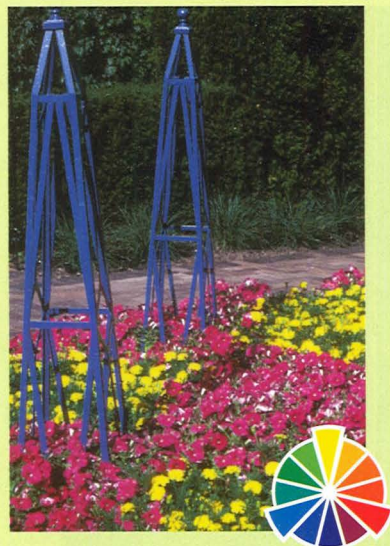
Relationships between colors are illustrated in a color wheel.



Complementary colors, such as red and green or purple and yellow, are located directly across from each other on the color wheel. Complementary color combinations create strong contrast in a landscape. **Analogous colors** are located next to each other on the color wheel; for example red, orange, and yellow. Such combinations have more subtle visual differences than complementary combinations and can be used to create a continuous spectrum of color.



Other possible color schemes use warm colors or cool colors to create certain effects. *Warm colors*, such as red, orange, and yellow, tend to create high visual contrast; they jump out in a landscape and can appear closer to the viewer than other elements. *Cool colors* like blue, green, and violet, on the other hand, tend to recede into the surrounding landscape and be more subtle.



A *triadic* planting scheme uses three colors that are equidistant from each other on the color wheel, such as red, yellow, and blue or green, orange and violet. This creates great visual contrast in the garden.



Monochromatic color combinations use one color with the full range of values from the lightest to the darkest shades. A red monochromatic color scheme, for instance, might include plants from a light pink to a dark burgundy.



Gray plants tend to soften most color combinations by providing a graceful transition from one color to another and can be an important part of the overall planting composition. White tends to be very bright and bold in a landscape (especially in a shaded location) and should be used in limited amounts or as focal points.



This eye-pleasing combination demonstrates the value of choosing a variety of textures: coarse ('Annabelle' hydrangea), medium ('Jack Frost' brunnera), and fine (variegated hosta).



The contrasting textures of boxwood and hosta are due to their leaf sizes.

Texture—A plant's texture depends on the size of its leaves and stems and their three dimensional arrangement. Plants such as an 'Annabelle' hydrangea with large, widely spaced leaves and thick stems have coarse texture. Using a combination of coarse textured plants creates a bold plant grouping. Plants such as boxwood have a fine texture due to their small, closely spaced leaves and thin stems.

Texture tends to be the most subtle and least-used aesthetic plant characteristic. When used to produce strong visual contrasts or simple backdrops for other landscape elements, it fills an important role in landscape aesthetics.

Because deciduous plants lose their leaves in the fall, it's important to consider their stem size and arrangement, not just their leaf size. Densely branched deciduous shrubs, such as spirea and honeysuckle, are generally fine textured but they may still create an adequate screen even after their leaves have dropped.



Densely branched shrubs are an effective screen even without leaves.



Overgrown foundation plantings make it difficult to reach the entrance to this home.



These shrubs with loose and open branching habits do not make a functional screen.

Mature Size—A common mistake is selecting plants that become too large for their location. A good example is junipers or yews planted under picture windows. Although they may be sold in small pots, within a few years they will be tall enough and wide enough to completely cover the

window, unless they are given regular and drastic pruning. This not only increases maintenance costs but also creates plant stress and excess green waste; both consequences reduce the sustainability of the landscape. Additionally, the drastic pruning often reduces the natural grace and beauty of the plant. A more sustainable alternative is to plant a small shrub with a mature height that is below the bottom edge of the window. This plant will require minimal, if any, pruning to maintain its natural shape.

One way to help the landscape come in to the correct proportion more quickly is to install larger plants (3 or 5 gallon containers) of slow growing species, and smaller plants (4 inch or 1 gallon containers) of faster growing species.



Plant communities in nature include a combination of tall, medium and small plants. This layering effect can be recreated in a home landscape.

Learn from Nature

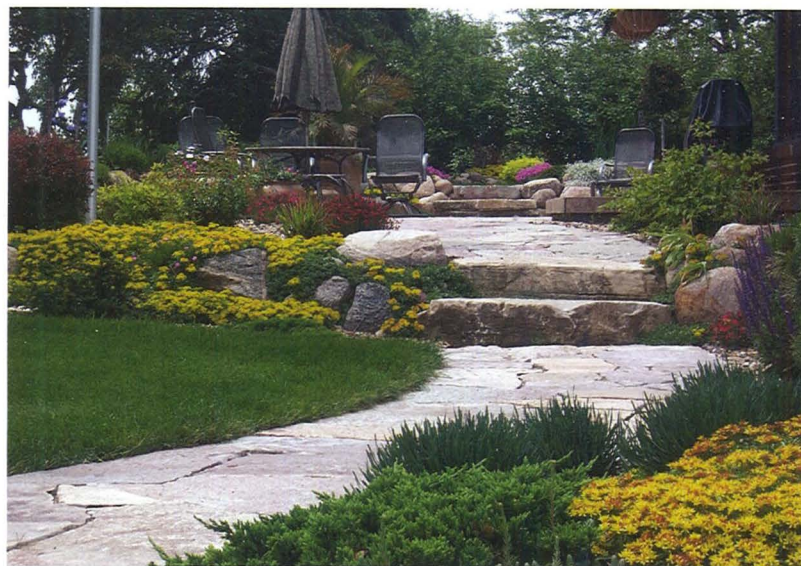
As your eye becomes trained to see and recognize design principles, you will notice them in many places, including natural settings. One of the best examples is how plants are “layered” in a natural landscape. Generally there is an over-story (tall trees), an under-story (shrubs and small trees ranging from 3 to 15 feet) and the ground plane (low growing shrubs, perennials, annuals or groundcovers). Human-made landscapes look more naturalistic if this type of layering is mimicked in the design.

Do it yourself? Or hire it done?

Although designing a landscape is well within the capability of many homeowners, the perspective of a design professional can enhance the quality of a landscape. In some cases you may need to hire someone with additional expertise in order to complete your project.

Some nurseries and garden centers still provide a free plan if plant purchases are made but many grant rebates based on a minimum purchase. Other businesses now charge for landscape design services on an hourly basis. Landscape architects and landscape designers normally charge by the hour (plus expenses) or as a percentage of the cost of project materials. By viewing landscape design as an investment and a service where you do "get what you pay for," homeowners can begin to better understand the importance and benefits of quality design.

One of the first steps is to decide what kind of help you need and then find the professional who can provide the desired expertise.



This beautiful backyard meets the homeowners' needs by providing a space for entertaining and attractive planting combinations. Repeating the stone surface of the "floor" in the edging boulders helps create unity.

Designers have a wide variety of backgrounds, skills, and education. In general, most have received some formal education in design, but experience also plays an important role.



Deciding whether to tackle a job yourself may depend on your available time, budget, and skills.

Professional Societies

**American Society of
Landscape Architects**
www.asla.org

**Association of Professional
Landscape Designers**
www.apld.org

**International Society of
Arbiculture**
www.isa-arbor.com

**Iowa Nursery and Landscape
Association (INLA)**
www.iowanla.org

**Nebraska Nursery and
Landscape Association**
www.nnla.org

**Professional Landcare
Network (PLANET)**
www.landcarenetwork.org

Questions to Ask

States may require registration and/or licensing; however, registration doesn't guarantee quality or satisfactory workmanship. The following list of questions provide topics to discuss when interviewing companies or individuals:

- What is the company's average size job?
- Do they service the area where you live?
- Are estimates and/or designs free?
- If not, are the quoted prices fixed or just estimates?
- Can they provide a list of references or recent clients that you may contact?
- Do they have a list of recently completed jobs you can visit?
- Are there any properties they completed several years ago that you can visit?
- How long has the company been in business?
- What certifications and/or college degrees are held by the owners, managers, workers?
- Who will be your main contact for additional questions and concerns?
- How will you be billed, and what type of payment do they accept?

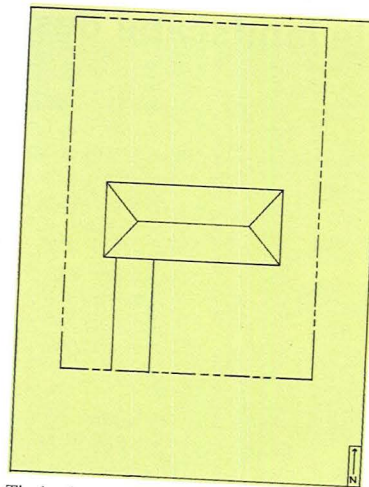
Who does what? A summary of available landscape design assistance

Professional	Focus of Expertise and Design Roles	Typical Education, Certification, or Registration
Architect	Small-scale to large-scale residential, commercial and institutional building and structural design; also has training in general site design and interior design	Bachelor's or Master's Degree Registration by State Board for Professional Architects; requires testing and professional experience
Certified Landscape Designer	Residential (all scales, usually small to medium) and commercial (small scale); focus on planting design and conceptual site design	Associate's or Bachelor's Degree Certification through Association of Professional Landscape Designers; granted upon fee payment and submission/approval of professional work portfolio
Certified Nursery Professional	Residential (usually small to medium scale); focus on design with plant materials	No formal education required Certified through state Nursery and Landscape Associations after completion of professional training and examination on landscape design, plant identification, and garden center products/sales information
Civil Engineer	Commercial and institutional site and utilities design; also has expertise in structural design	Bachelor's or Master's Degree Registration by State Board for Professional Engineers; requires testing and professional experience
Horticulturist	Plant information and cultural/maintenance practices for vegetable, fruit, and ornamental plants; also has expertise in insects and diseases that affect those plants, native and/or adapted landscape plants, and small to medium scale landscape design	Associate's through Doctorate Degree No registration; certification available but not typical
Landscape Architect	Small-scale to large-scale residential, commercial, and institutional landscape and site design; also has expertise in natural resources management and visual/scenic resources	Bachelor's or Master's Degree Registration by State Board of Landscape Architects; registration requirements vary but most states require testing and professional experience
Landscape Contractor	Residential and commercial (all scales); focus on planting and construction	May have Associate's or Bachelor's Degree; no formal education required No registration; some states have certification programs; expertise may be in construction but not design; may be best suited to implement plans from others
Landscape Designer, Garden Designer	Residential (all scales, usually small to medium); focus on design with plant materials	May have Associate's or Bachelor's Degree; no formal education required No registration; wide variety of expertise and skill levels
Structural Engineer	Structural design (buildings, retaining walls, earth fill)	Bachelor's or Master's Degree Registration by state Board for Professional Engineers; requires testing and professional experience

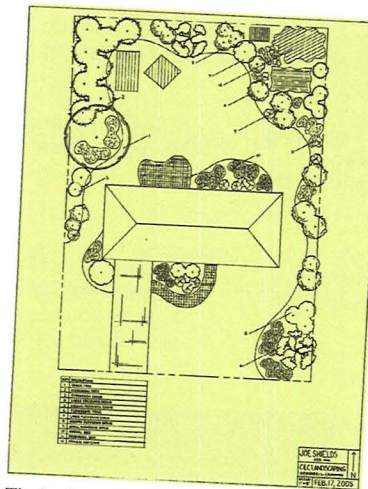
Work through the Landscape Design Process

All of these topics—use areas, principles of design and plant selection—come together in the landscape design process. Developing a landscape design usually requires five steps.

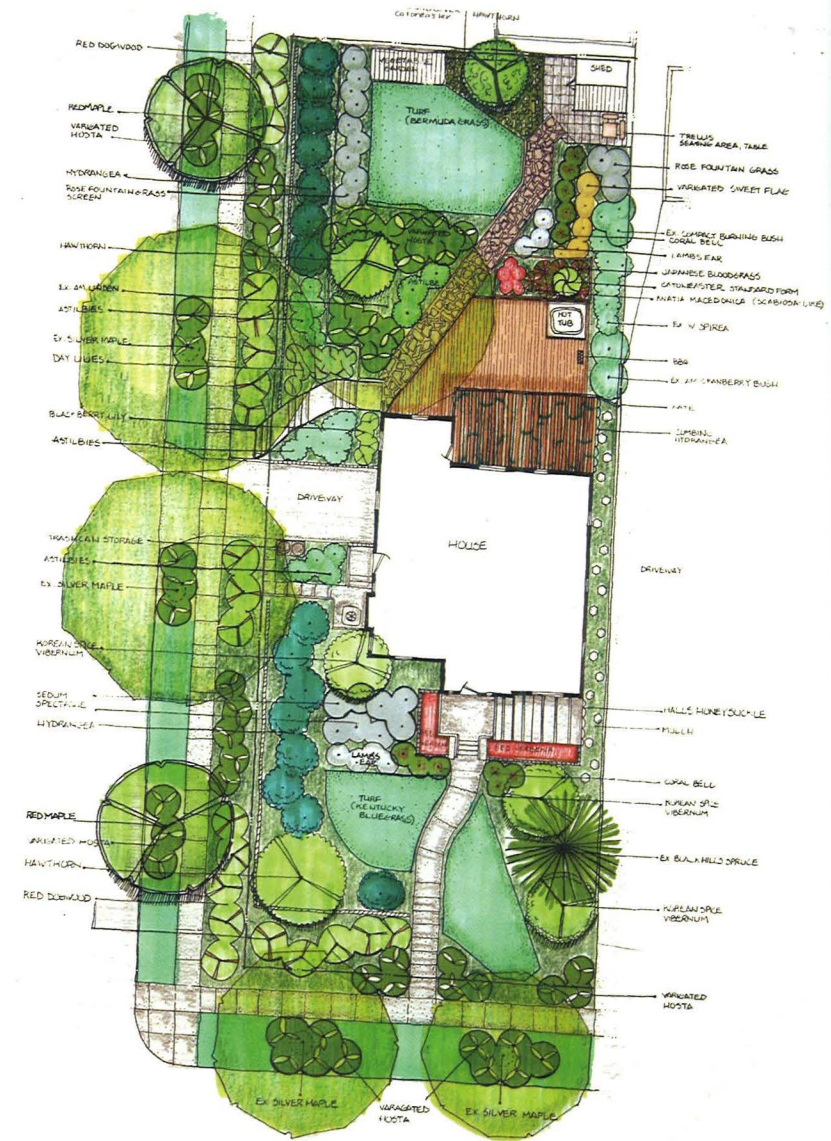
- Draw a base map of the site
- Do a site analysis and assess family needs and wants
- Brainstorm possible layouts and design ideas
- Refine the preliminary design
- Draw the final plan and plant list



The landscape design process begins with a scaled drawing of your property.



The landscape design process finishes with a completed landscape plan and plant list.



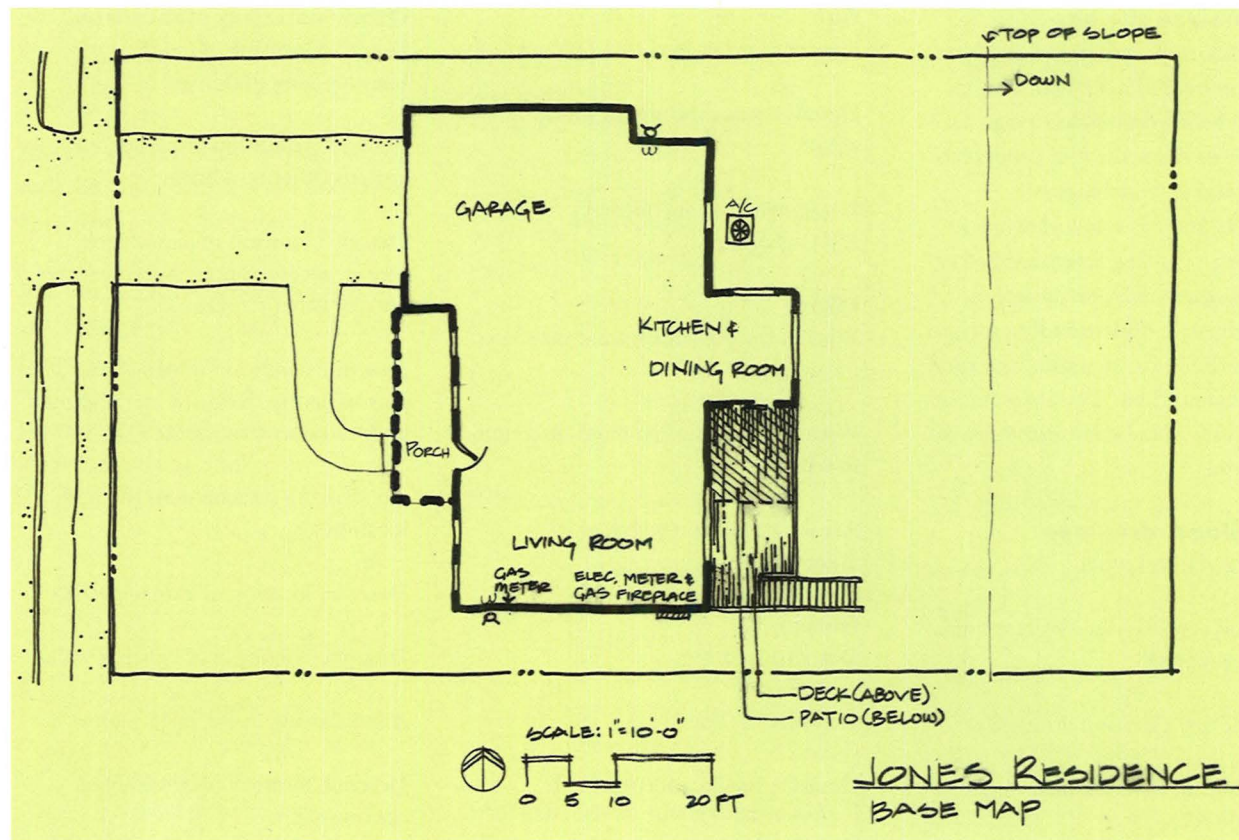
A fully rendered (colored) final design brings this home landscape to life. Larger circles represent trees. Understory plants (shrubs and perennials) are indicated by smaller circles. This creates effective layering within the design. The repeated plant groups add unity.



Creating an aesthetic, functional, and sustainable landscape is the goal of the landscape design process.

Remember that landscape development can be, and often is, a long-term process. Completing the landscape in phases over a multi-year period has two advantages. It allows you to evaluate plants as they grow and mature, and for large projects, may be more financially manageable.

A master plan is important for any size project, but it is essential for large phased projects so that all work done on the property blends into the desired final outcome. A good master plan helps you set priorities and focus on which tasks need to be done first.



An accurate base map is an important first step in drawing the landscape plan. Noting window locations helps identify views that need to be screened or enhanced.

1. Draw a base map

Landscape designs are generally drawn from a bird's-eye view in what designers call "plan view." To prepare a base map of your property use graph paper and let one square equal a certain number of feet, or draw it to scale using a ruler or scale. For small lots, a scale of 1 inch equals 8 feet should be sufficient. A scale of 1 inch

equals 16 feet is more appropriate for larger lots. The base map should include:

- Scale used
- North directional arrow
- Property lines
- Basic drainage patterns (Use an arrow to show direction of surface water flow or poor drainage areas)
- Location of existing landscape features: house, garage, other buildings, trees, walks, and driveways

- Doors, windows, porches, and different rooms of the house
- Septic tank, sewer lines, or underground power lines
- Views (Point arrows in the direction of each good view; also indicate views that need screening)
- Undesirable features of the property or of adjoining property

Many homeowners find it advisable to make several photocopies of this base map to use for the next steps.

2a. Analyze the site

A thorough site analysis tells you what you have to work with on the site and helps you develop a plan to enhance or maintain your property's beauty and sustainability.

A site analysis also can help you evaluate an existing landscape before beginning a renovation project. A comprehensive understanding of your site identifies existing light, moisture, and soil conditions. This information helps create a landscape that is easier to sustain.

Soil, slope, drainage

Describe the soil type:

Does soil type vary in different areas of the property?

Describe any elevation differences:

Are retaining walls needed?
If so, where?

Describe any soggy areas:

Where does water drain?

Is a French drain needed?
If so, where?

Sun

Describe sun exposure in public areas:

Describe sun exposure in private areas:

Is summer shading needed?
If so, where?

Wind

What is the prevailing wind direction in summer?

What is the prevailing wind direction in winter?

Are windscreens needed?
If so, where?

House

Describe location:

Describe the color:

Describe the architectural style:

Describe any unique features:

Describe the most desirable views:

Describe any undesirable views:

Describe location of utilities:

Other existing structures

Describe location of garage and/or other buildings:

Describe condition of garage and/or other buildings:

Describe location of patio, deck, play structure, fences, water features, and/or other structures:

Describe condition of patio, deck, play structure, fences, water features, and/or other structures:

Are existing structures in the best location?

Describe location of existing walks:

Describe condition of existing walks:

Are walkways in the right places?

Describe location of driveway or parking strip:

Describe condition of driveway or parking strip:

Existing Plants

Describe location of existing trees, shrubs, and surface roots:

Describe condition of existing trees and shrubs:

Describe location of flower and/or vegetable garden areas:

Describe condition of flower or vegetable garden areas:

Other considerations

Describe your preferred level of maintenance:

Are sound buffers needed?
If so, where?

Describe other conditions that affect use of yard area:

A downloadable copy of these two pages is available at www.extension.istate.edu/store/Publications/PM2004questions.pdf

2b. Analyze family needs and wants

Answering questions related to age of family members, types of pets, and personal plant preferences help determine how outdoor spaces are used. You may want to add additional questions pertaining to your landscape or family/lifestyle situation.

Identifying as many facts/wants/needs as possible at this stage increases the likelihood that the resulting landscape is a success. Even if you work with a professional designer to develop your landscape plan, considering these questions will help you do a better job of telling that person what you want/need.

Yard Use

Who will use the yard?

- ☐ Adults
- ☐ Children (ages:)
- ☐ Elderly
- ☐ Pets (describe:)

When is the yard used?

- ☐ Spring
- ☐ Summer
- ☐ Fall
- ☐ Winter

Are you satisfied with the front door/public entry space? If not, how could it be improved?

Are you satisfied with the back door/family entry space? If not, how could it be improved?

Are you satisfied with the transition between indoor and outdoor living areas? If not, how could it be improved?

Are you satisfied with the way existing walkways connect parts of the yard? If not, how could it be improved?

Are you satisfied with the current amount and type of outdoor lighting? If not, how could it be improved?

What outdoor structures/features would you like to add?

- ☐ Patio or deck
 - ☐ 2 to 4 people
 - ☐ 4 to 8 people
 - ☐ 8 to 12 people
 - ☐ 12+ people
- ☐ Shade cover for patio/deck
- ☐ Children's play area
- ☐ Cooking/grilling area
- ☐ Fenced vegetable garden
- ☐ Raised planters
- ☐ Dog pen/run
- ☐ Storage shed
- ☐ Gazebo
 - ☐ 2 to 4 people
 - ☐ 4 to 8 people
 - ☐ 8 to 12 people
 - ☐ 12+ people
- ☐ Clothesline
- ☐ Fence(s)
- ☐ Swimming pool
- ☐ Spa/hot tub
- ☐ Sculpture
- ☐ Fire pit
- ☐ Boulders
- ☐ Dry creek
- ☐ Mounds/berms

- ☐ Pond
- ☐ Bench
- ☐ Fountain
- ☐ Waterfall/stream
- ☐ Greenhouse
- ☐ Putting green
- ☐ Rain barrel
- ☐ Off-street parking
 - ☐ for guests
 - ☐ for RVs
 - ☐ for boats
- ☐ Irrigation system
- ☐ Other

What items need storage space?

- ☐ Garden equipment
- ☐ Garbage cans
- ☐ Bicycles
- ☐ Outdoor toys
- ☐ Sports equipment
- ☐ Lawn furniture/cushions
- ☐ Other

Maintenance considerations

How much time do family members have for yard care?

Is hiring outside help an option?

Design considerations

What is your preferred design style?

- ☐ Formal
- ☐ Semiformal
- ☐ Informal

What themes/styles do you want reflected in your outdoor space?

- ☐ European
- ☐ Asian

- ☐ Natural
- ☐ Other

What is your preferred shape (for lawns, walkways, decks)?

- ☐ Rectangles
- ☐ 45° angles
- ☐ Circles
- ☐ Curving/free-form
- ☐ Combination
- ☐ Don't care

List your favorite colors:

List your least favorite colors:

Describe any special considerations (wheelchair access, etc):

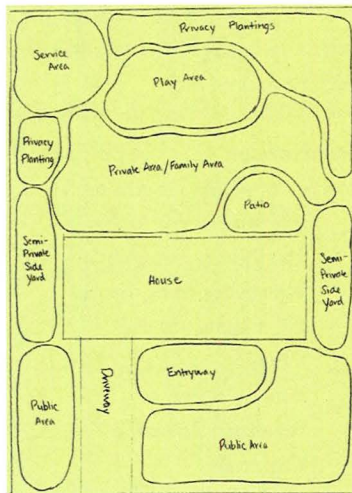
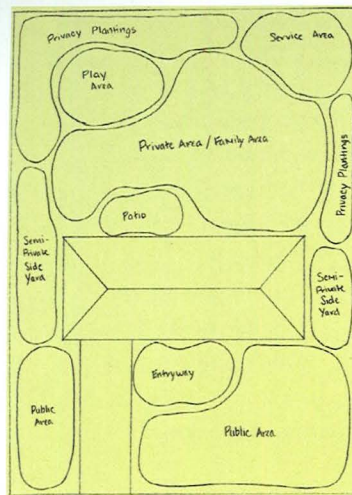
Plant choices

What types of plants do you prefer?

- ☐ Evergreens trees/shrubs
- ☐ Deciduous trees/shrubs
- ☐ Flowering trees/shrubs
- ☐ Fruit trees/shrubs
- ☐ Vines
- ☐ Annual flowers
- ☐ Perennial flowers
- ☐ Vegetables
- ☐ Herbs
- ☐ Fragrant plants
- ☐ Wildlife/native
- ☐ Other

Do any family members have specific plan allergies? (List plants)

Are deer a problem?



Creating a number of different bubble diagrams to show how the landscape space could be organized is a critical part of the brainstorming process.

3. Brainstorm alternative layouts and design ideas

Many people think this step is the most fun because anything is possible. By involving all family members, and perhaps even neighbors or friends, your collection of ideas can be increased. This is also the time to check books and magazines for pictures of landscapes you like, or don't like. Often it is easier to identify what you want in a photo or on a garden tour, than it is to try to describe it in words. The brainstorming step has two phases: sketching functional diagrams and creating a preliminary design.

Sketch functional diagrams—

Functional diagrams are a first attempt at organizing the landscape space in a way similar to a sketch for a home's floor plan. The use areas described earlier are considered along with the information from the questionnaire. To create functional diagrams, lay a piece of tracing paper over your base map and draw bubble shapes to represent the previously identified use areas within the landscape.

As you think about different ways to organize the space, consider circulation patterns within the landscape. How will people move between the house, garage, and landscape? Try



Lawn maintenance must be considered in order to avoid areas that are difficult to mow (left) or difficult to water or fertilize (right).



different combinations in relation to rooms of the house, surrounding areas, and potential views. Consider current utility locations, drainage patterns, and plant material locations as these elements may impact possible design scenarios.

Another issue to consider is maintenance. Planting beds that include perennials or annuals and are more than 4 feet wide are difficult to maintain unless a work path is created within the bed.

Lawn areas with angles of 90° or less are more difficult to mow. Turf strips that are narrower than 4 to 5 feet should typically be avoided, since it can be difficult to effectively mow, water and fertilize these areas. In locations where planting beds are located

next to buildings, an accessible zone at least 3 feet wide should be provided adjacent to the building to accommodate maintenance work, such as painting or washing windows.

As tempting as it may be to jot down names of specific plants for these sketched areas, remember that the focus of this exercise is to determine general areas within the landscape. Deciding which plants go where is a later step. The key consideration in developing a functional diagram is to assign every portion of the ground area to a use or plant type. Left-over areas not designated on the functional diagram will become the left-over areas in the landscape that don't serve a purpose and/or are difficult to maintain.

Create a preliminary design

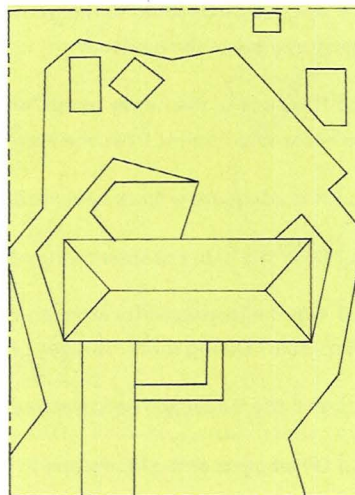
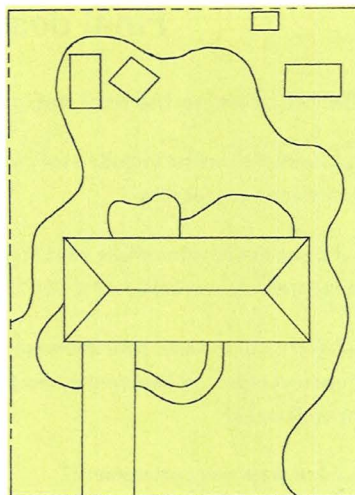
design—The next step converts the loose, freehand bubble diagrams into a more refined, but still preliminary, design. The space is clearly organized, the outdoor rooms become obvious, and masses of plants are illustrated and characterized.

Three design aspects are considered simultaneously during this phase: the seven design principles discussed earlier, plus form and spatial composition.

A form composition is created when the different bubbles from the functional diagrams are given specific shapes. For example, the bubble that represented the lawn area could be drawn as a rectangle if a rectilinear style is used, or as a kidney bean shape if a more informal curvilinear style is selected.

Different forms (squares, rectangles, circles, etc.) are used to represent areas in the landscape such as a patio, lawn, or planting beds. Using similar forms for each of these landscape elements helps create unity and structure within the design.

Experimenting with different forms is an important part of the brainstorming process as you work toward an attractive and functional layout for your landscape.



Once the landscape space is organized using the bubble diagrams, experiment with different lines (curved, straight, angled) to decide what shape the different areas will become.



A pergola can be used to create a sense of enclosure and provide light shade.

Spatial composition focuses on the three-dimensional outdoor space. How do the trees, shrubs, low-growing plants and hardscapes combine to make the ceiling, walls, and floor of outdoor rooms? All of these will influence how the landscape looks and how it “feels” to the user. For example, trees with a tall, loose canopy create a sense of openness, while a tree with a dense, and relatively low branching canopy creates a sense of enclosure. Privacy fences can be used to create a visual and physical barrier between you and your neighbor, and even give

a sense of enclosure. Instead of using trees to create an overhead canopy, a pergola covered with vines can be used.

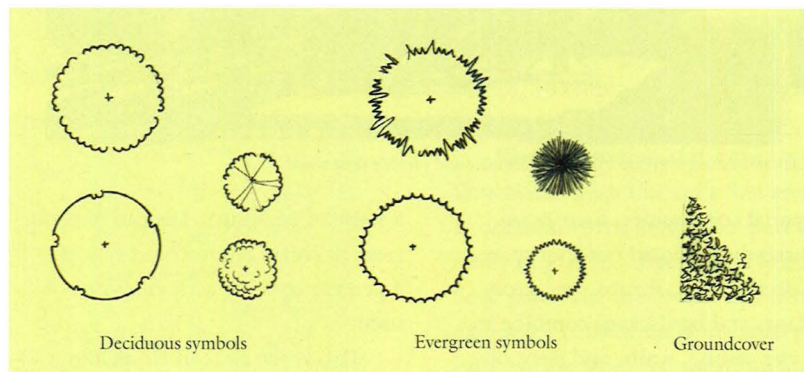
This is the time to think about how you want to interact with your landscape. Do you want to see it all at once? If this is the case you won’t want to plant tall shrubs or trees that would visually divide the space into rooms or block views.

On the other hand, if you want to experience just a piece of the landscape at a time, then dividing the overall design into outdoor “rooms” will be important.

4. Refine the preliminary design

As you move into the final step of the design process, begin drawing landscape symbols on the tracing paper to represent specific landscape elements. Don't worry about selecting individual plants, a label of "deciduous tree" or a mass representing "perennials" is sufficient. Specific plants are decided in the final step.

After you have developed a final draft, take time to refer back to your earlier notes, site analysis, and landscape questionnaire. Think carefully about the design and how it will meet your needs. Now is also a good time to ask for feedback from friends or neighbors, or anyone who is a little bit removed from the project.

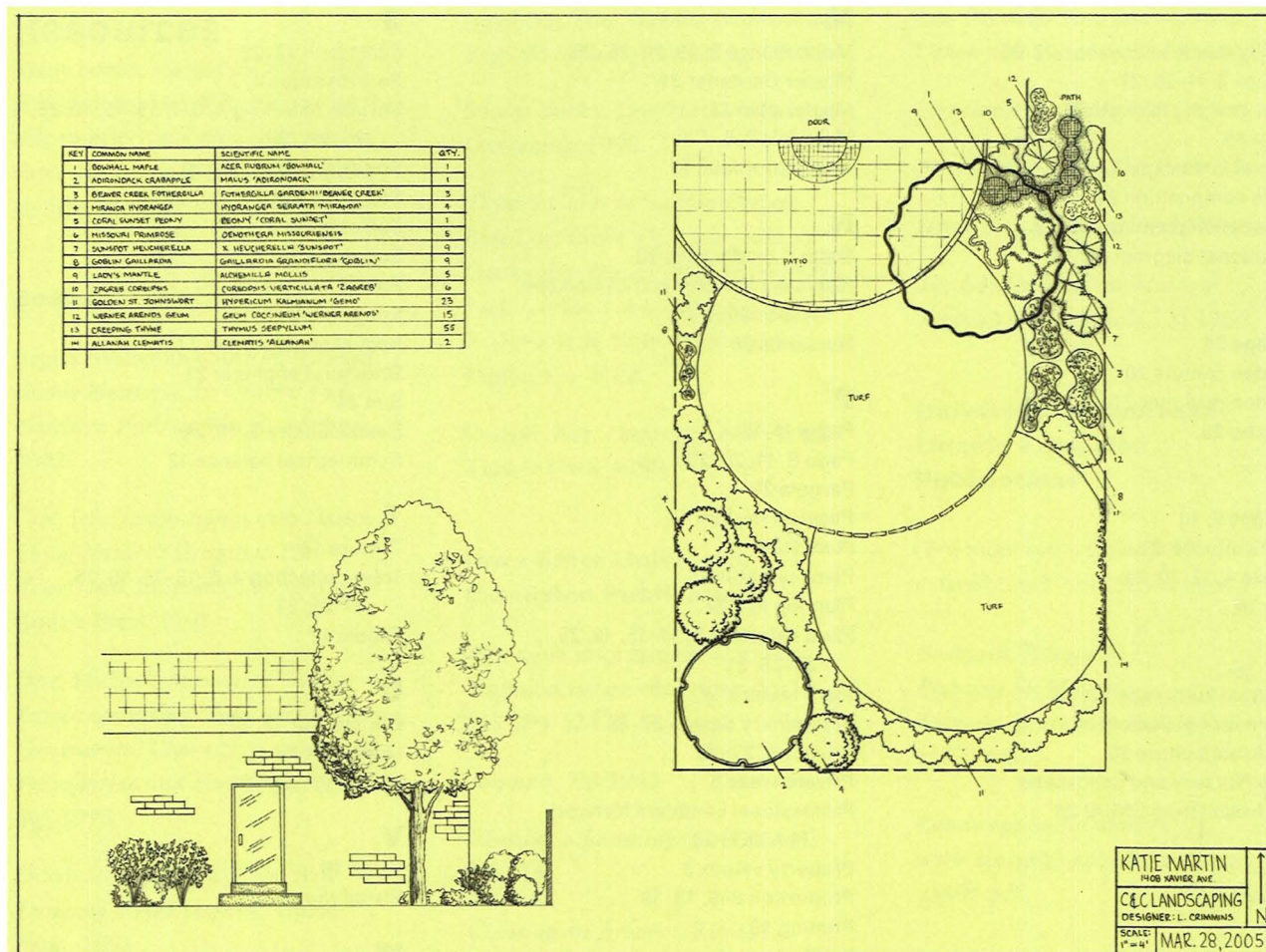


Simple geometric symbols can represent various plant types.

Final design checklist

Before drawing the final design consider this checklist:

- ☐ Does the design include everything you wanted? If not, are the omissions acceptable?
- ☐ Does the design reflect your answers to the site analysis and family needs/wants worksheets? If not, is there a good reason for the change?
- ☐ Were utility lines, roof downspouts, hose connections, and other "unmoveables" considered when placing planting beds and patios or walkways?
- ☐ Are walkways convenient?
- ☐ Are guests directed to the front door of the house, or to other important destinations in the landscape?
- ☐ Have any of the family needs/wants changed since the initial design process was begun? Does the current design reflect those changes?
- ☐ Has adequate privacy been incorporated into the private area?
- ☐ Does the plan consider mature heights and widths of trees and shrubs?
- ☐ Will the landscape be attractive when viewed from the living room? Bedroom? Dining room? Kitchen? Porch?
- ☐ Will the landscape be attractive all year long?
- ☐ Do all parts of the landscape fit together as a unified design?
- ☐ Does the design realistically reflect the maintenance budget and commitments that will be available over time?
- ☐ Are the hardscapes appropriately sized?
- ☐ Has the service or work area been incorporated?



This final design includes the landscape drawn in plan view, an elevational view of the patio area, and the planting key.

5. Draw the final landscape plan

Now is the time to select specific plants and use landscape symbols to represent them. These symbols need to be drawn to scale and should represent the mature spread of the plant. For example, if you are using a scale of 1 inch equals 10 feet, then a maple

tree with a 20-foot spread would be represented by a circle with a diameter of 2 inches.

The final plan also includes a planting key. This becomes your shopping list and includes both botanical and common plant names, a number or letter abbreviation that corresponds to the plan, and quantity. You also may want to include a column indicating the reasons for

selecting each plant (white flowers/red fall fruit, fragrant blossoms, disease resistance, etc.) Oftentimes, specified plants may not be available due to seasonal variations in plant availability or if a phased project requires plants several years into the future. By creating a listing of the desired characteristics that led to the initial selection, alternative plants can be substituted that will fill a similar landscape role.

What's next?

With the final plan completed, now is a good time to figure the costs for plants, hardscapes and other materials needed to make your design come to life. With a limited budget you may need to prioritize which parts of the landscape should be done first.

Another way to stretch your landscape dollar is to use less expensive hardscape materials that still achieve the same aesthetic. For example choose a locally available limestone, rather than a bluestone material that must be transported from the northeast.

You also can use smaller sized plants, 1 gallon for example, of the fastest growing plants and reserve the larger sized, and more expensive, choices for those plants that are slower growing.

The good news is that having a design provides a guide to how the landscape will ultimately develop. By following that plan, even if it is in stages, all of the elements should come together to create the landscape you envisioned.

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Resources

Many books, magazines, extension publications, and Web sites are available to help you gather information about landscape planning and plant choices. Here are a few to consider.

Books

Bagley, Walter and Sutton, Richard. *Woody Plants for the Central and Northern Prairies*. Blackburn Press. 2002.

Cox, Jeff. *Landscaping with Nature: Using Nature's Designs to Plan Your Yard*. Emmaus, Pennsylvania: Rodale Press. 1991.

Dirr, Michael. *Manual of Woody Landscape Plants: Their Identification, Ornamental Characteristics, Culture, Propagation and Uses*. Stipes Publishing. 1998.

DiSabato-Aust, Tracy. *The Well-Designed Mixed Garden*. Timber Press. 2003.

Ferguson, Nicola. *Right Plant, Right Place*. Fireside, Simon & Schuster. 1992.

Hobhouse, Penelope. *Color in Your Garden*. Little, Brown & Co. 1985.

Hobhouse, Penelope. *Plants in Garden History*. Pavillion Books. 1997.

Kingsbury, Wellington. *The Ultimate Planting Guide*. Wellington House. 1996.

Newbury, Tim. *Garden Design Made Easy*. Ward Lock Publishing. 1999.

Sunset Books. *Low-Maintenance Gardening*. 1998.

Taylor's Guide to Garden Design. Based on Taylor's Encyclopedia of Gardening. 4th ed. 1961 by Norman Taylor, revised and edited by Gordon P. DeWolf, Jr. Boston: Houghton Mifflin Co. 1988.

Oudolf, Piet. *Designing with Plants*. Timber Press. 1999.

Iowa State University Extension Publications

(For more information, visit www.extension.iastate.edu/store; or call 515-294-5247)

Annuals, PM 1942

Choosing a Landscape Contractor, RG 213

Choosing an Arborist, RG 214

Conifer Species for Iowa, PM 1429g

Deciduous Shrubs, PM 1943

Growing Rhododendrons and Azaleas in Iowa, RG 704

Iowa's Shrubs and Vines, IAN 307

Landscape Plants for the Midwest, PM 212

Low Growing Trees and Shrubs for Urban and Rural Iowa, PM 1429d

Perennials for Shade, PM 1913

Perennials for Sun, PM 1914

Street Trees for Iowa, PM 1429c

The Garden Guide to Midwest Annuals & Perennials, PM 1966

University of Nebraska-Lincoln Extension Publications

(For more information, visit extension.unl.edu/publications)

Backyard Wildlife—Planting for Habitat
www.ianrpubs.unl.edu/sendIt/g1571.pdf

Landscape Sustainability
www.ianrpubs.unl.edu/sendIt/g1405.pdf

Turf in the Landscape
www.ianrpubs.unl.edu/sendIt/g1418.pdf

Wildflowers for the Home Landscape
www.ianrpubs.unl.edu/sendIt/g1074.pdf

Windbreak Design
www.ianrpubs.unl.edu/sendIt/g1304.pdf

Web sites

All-America Selections (AAS)—
www.all-americaselections.org

Iowa Master Gardener Program—
www.mastergardener.iastate.edu

ISU Extension Distribution Center—
www.extension.iastate.edu/store

ISU Forestry Extension—
www.ag.iastate.edu/departments/forestry/ext/ext.html

ISU Horticulture—
www.yardandgarden.extension.iastate.edu

Nebraska Forest Service—
www.nfs.unl.edu

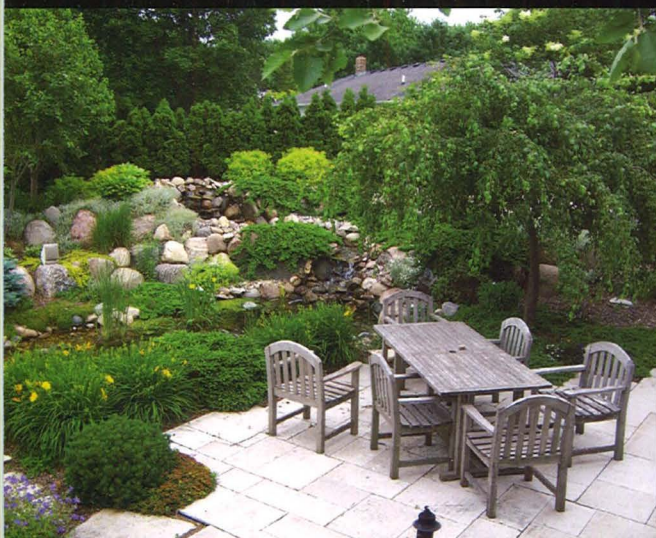
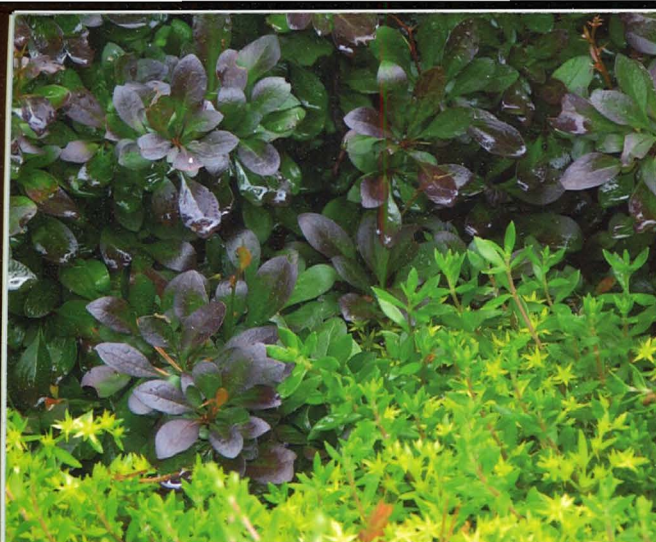
Nebraska Master Gardener Program—
mastergardener.unl.edu

Nebraska Statewide Arboretum—
arboretum.unl.edu

University of Nebraska Horticulture Paradise—
hortparadise.unl.edu

Questions also may be directed to Iowa State's Hortline (515) 294-3108 during business hours (10-12, 1-4:30, M-F).

No endorsement of companies or their products mentioned is intended, nor is criticism implied of similar companies or their products not mentioned.



Taking a problem-solving approach is a good way to start thinking about your landscape and what you want it to be. By identifying the constraints of your site and creatively applying basic design principles you can create a functional landscape that meets your needs, is environmentally sound and aesthetically pleasing, and demonstrates your own sense of style.

These tools will help you achieve the look you want:

- Step by step guide to working through the landscape design process
- Explanation of design principles with illustrations showing how to apply them to your yard
- Worksheets to help you analyze your yard and identify how you want to use your outdoor spaces
- Guidelines for choosing the "right" plants
- Summary of the types of landscape design assistance available

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